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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,021	03/19/2002	Tadashi Ishibashi	9793822-0158	6238

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David R Metzger
Sonnenschein Nath & Rosenthal
Wacker Drive Station
PO Box 061080
Chicago, IL 60606-1080

EXAMINER

THOMPSON, CAMIE S

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/009,021	Applicant(s) ISHIBASHI ET AL.	
	Examiner Camie S. Thompson	Art Unit 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on AfterFinal Amendment filed 11/9/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-35,37,38,49-53 and 56-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-35,37,38,49-53 and 56-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Examiner regrets the untimely reopening of prosecution.
2. Applicant's amendment and accompanying remarks filed November 9, 2005 have been acknowledged.
3. Examiner acknowledges cancelled claims 1-28, 36, 39-48 and 54-55.
4. The rejection of claims 9-15 and 17-18 under 35 U.S.C. 112, second paragraph is withdrawn due to applicant's cancellation of claims 1-28.
5. The rejection of claims 9-13 and 15 under 35 U.S.C. 102(e) as being anticipated by Ichimura et al., U.S. Patent Number 6,525,212 is withdrawn due to applicant's cancellation of claims 1-28.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
7. Claims 56-58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 56-58 are rendered indefinite because they are dependent from claim 9 which has been cancelled.

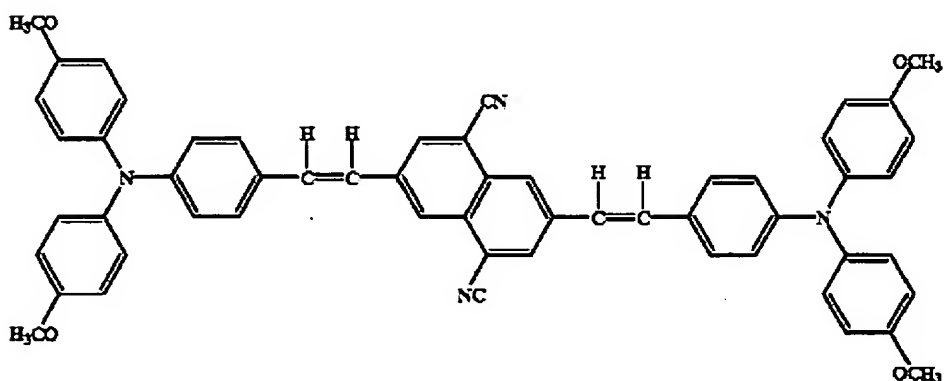
Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 29-35, 37-38, 49-53 and 59-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tadashi et al., U.S. Patent Number 6,265,088 in view of Sato et al., U.S. Patent Number 6,660,411.

The Tadashi reference discloses an organic electroluminescence device that comprises an organic layer having a luminescent region and is provided between an anode and a cathode. The organic layer comprises at least one distyryl compound such as



Art Unit: 1774

as per the instant claims (see column 2, line 64-column 3, line 5 and Formula (4)-3).

Additionally, the reference discloses that the luminescent layer may comprise a combination of distyryl compounds as per the instant claims (see column 4, lines 10-16). Also, in column 4, lines 10-16 of the reference it is disclosed that the device is able to obtain stable red luminescence with the distyryl compounds. The distyryl compounds contained in the reference have both electron transportability and hole transportability and can be used as the luminescent layer serving also as an electron transport layer or as a luminescent layer serving as a hole transport layer as per the instant claims. Figures 1-4 of the reference disclose that the device is a multilayer structure. Column 12, lines 5-23 of the Tadashi reference discloses that a fluorescent material is incorporated into the luminescent layer to obtain red luminescence. Tadashi also discloses that a hole blocking layer or an exciton-generating layer is incorporated into the luminescent region for controlling the transport of holes or electrons as per the instant claims. Column 11, lines 58-68 of the Tadashi reference discloses that the hole transport layer can comprise an aromatic amine and the electron transport material can comprise a pyrazoline as per instant claims 59-60. The Tadashi reference does not specifically disclose a phenanthroline structure as the hole blocking material. Sato teaches an electroluminescent device comprising an anode; a hole transport layer; an organic luminescent layer; a hole blocking layer; an electron transport layer and a cathode (see Figure 2). Additionally, Sato teaches that the luminescent layer can comprise a distyryl compound (see column 6, lines 49-column 7, line 10). Column 7, lines 19-45 of the Sato reference disclose that perylene can be used as the doping material. The Sato reference also teaches that the hole-blocking layer comprises a phenanthroline derivative (see column 3, lines 64-68). A hole blocking layer comprising phenanthroline has a

Art Unit: 1774

higher ionization potential than the luminescent layer comprising a distyryl compound.


Therefore, it would have been obvious to one of ordinary skill in the art to use a phenanthroline derivative in the hole blocking layer in order to further enhance the luminescent efficiency of the device (see Sato: column 3, lines 58-63).

Response to Arguments

10. Applicant's arguments with respect to claims 29-35, 37-38 and 49-61 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L Dye, can be reached at (571) 272-3186. The fax phone number for the Group is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


RENA DYE
SUPERVISORY PATENT EXAMINER
A.U. 1774 11/18/05